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DEICHMEISTER, NICHOLAS F

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
	10/774,306	DE JONG ET AL.
Office Action Summary	Examiner	Art Unit	
	Nick Deichmeister	2616	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>06 February 2007</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-14</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-14</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>06 February 2004</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2.   **Claims 7 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps.** See MPEP § 2172.01. The omitted steps are: all steps involved in response *as though the failure message was duly sent* (see claim 7, lines 2-3, claim 14, line 4).

Double Patenting

3.   The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees.   A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).
        A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a
terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with
37 CFR 3.73(b).

4.   **Claims 2-3 and 9-10 are provisionally rejected on the ground of**

nonstatutory obviousness-type double patenting as being unpatentable over

claims 1-3, 10 and 12-13 of copending Application No. 10/774307. Although the

conflicting claims are not identical, they are not patentably distinct from each

other because the claimed limitations are equivalent.

This is a <u>provisional</u> obviousness-type double patenting rejection because the

conflicting claims have not in fact been patented.

5.   **Claims 1, 4-6, 8 and 11-12 are provisionally rejected on the ground of**

nonstatutory obviousness-type double patenting as being unpatentable over

claims 1, 4 and 10 of copending Application No. 10/774307 in view of Yi et al (U.S.

Patent Application Publication No. US 2003/0007459 A1).   See explanation and

table below.

This is a <u>provisional</u> obviousness-type double patenting rejection.

6.   **Claim 13 is provisionally rejected on the ground of nonstatutory**

obviousness-type double patenting as being unpatentable over claim 10 of

copending Application No. 10/774307 in view of Yi et al and Brame et al (U.S.

Patent No. 5,253,253). See explanation and table below.

This is a <u>provisional</u> obviousness-type double patenting rejection.

7.   **Claim 7 and 14 are provisionally rejected on the ground of nonstatutory**

obviousness-type double patenting as being unpatentable over claim 10 of

copending Application No. 10/774307 in view of Yi et al and Odenwalder et al (U.S.

Patent Application Publication No. US 2002/0159410 A1). See explanation and

table below.

This is a <u>provisional</u> obviousness-type double patenting rejection.

Below is a comparison of the respective claims. **Bold** sections of claims from the

instant application indicate non-identical features found in claims from the copending

application, also marked in **bold,** or by one or more secondary references, shown

below.

Instant Application 10/774306	Copending Application 10/774307
Claim 1: A method of operating a device in a mobile communications network, the device operating using a protocol having a physical layer, a user layer and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS system, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer, **wherein said SDU comprises information indicative of a process**, the method comprising in response to a signal from said RLC layer, said signal being indicative of discard of said SDU, causing said RRC layer to resubmit said SDU to said lower layer a predetermined number N of times; and in response to N further signals indicative of said discard, causing said RRC layer to submit to said RLC layer **a failure response message indicative that said process indicated by the information of the SDU has failed.**	Claim 1: A method of operating a communication device in a mobile communications network, the device operating using a protocol having a physical layer, and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS system, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer, the method comprising in response to a signal from said RLC layer, said signal being indicative of discard of said SDU: causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times; and in response to N further signals indicative of said discard, causing said RRC layer to submit to said RLC layer a CELL UPDATE message indicative of an unrecoverable error in said RLC layer for emission in response thereto.
Claim 2: A method according to claim 1, further comprising setting an operating mode wherein an acknowledgement of	Claim 2: A method according to claim 1, further comprising setting an operating mode wherein an acknowledgement of

successful reception of said SDU is awaited.	successful reception of said SDU is awaited.
Claim 3: A method according to claim 1, wherein N=0.	Claim 3: A method according to claim 1, wherein N=0.
Claim 4: A method according to claim 1, **wherein if said RLC layer discards said failure response message, said method further comprises causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times; and in response to N further signals indicative of said discard, submitting by said RRC layer to said RLC layer of a CELL UPDATE indicative of an unrecoverable error in said RLC layer for emission in response thereto.**	Claim 1: A method of operating a communication device in a mobile communications network, the device operating using a protocol having a physical layer, and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS system, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer, the method comprising in response to a signal from said RLC layer, said signal being indicative of discard of said SDU: causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times; and in response to N further signals indicative of said discard, causing said RRC layer to submit to said RLC layer a CELL UPDATE message indicative of an unrecoverable error in said RLC layer for emission in response thereto.
Claim 5: A method according to claim 1, **wherein if said RLC layer discards said failure response message,** said method further comprises submitting by said RRC layer to said RLC layer of a CELL UPDATE message arranged to cause the network control device to emit for said user device a CELL UPDATE CONFIRM message arranged to cause said user device to reconfigure to a determined state.	Claim 1: A method of operating a communication device in a mobile communications network, the device operating using a protocol having a physical layer, and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS system, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer, the method comprising in response to a signal from said RLC layer, said signal being indicative of discard of said SDU: causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times; and in response to N further signals indicative of said discard, causing said RRC layer to submit to said

| | RLC layer a CELL UPDATE message indicative of an unrecoverable error in said RLC layer for emission in response thereto.

Claim 4: A method of operating a mobile communications network having at least one cell, said cell having at least one user communication device and at least one network control device for communicating with the or each user communication device, the or each user device operating using a protocol having a physical layer, and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer, the method comprising in response to a signal from said RLC layer, said signal being indicative of discard of said SDU, causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times; and in response to N further signals indicative of said discard submitting by said RRC layer to said RLC layer of a CELL UPDATE message arranged to cause the network control device to emit for said user communication device a CELL UPDATE CONFIRM message arranged to cause said user device to reconfigure to a determined state. |
|---|---|
| Claim 6: A method according to claim 1, **wherein if said RLC layer discards said failure response message**, said method further comprises releasing connection between peer layers at the said device and the said network and entering an idle mode. | Claim 7: A method of operating a communication device in a mobile communications network, the device operating using a protocol having a physical layer, and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer, the method comprising: in response to a signal from said RLC |

	layer, said signal being indicative of discard of said SDU, causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times; and in response to N further signals indicative of said discard, releasing the connection between peer layers at the said device and the said network and entering an idle mode.
Claim 7: A method according to claim 1, **wherein if said RLC layer discards said failure response message, causing said RRC layer to respond as though the failure response message was duly sent.**	Claim 1: A method of operating a communication device in a mobile communications network, the device operating using a protocol having a physical layer, and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS system, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer, the method comprising in response to a signal from said RLC layer, said signal being indicative of discard of said SDU: causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times; and in response to N further signals indicative of said discard, causing said RRC layer to submit to said RLC layer a CELL UPDATE message indicative of an unrecoverable error in said RLC layer for emission in response thereto.
Claim 8: A method of operating a device in a mobile communications network, the device operating using a protocol having a physical layer, a user layer and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS system, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer, **wherein said SDU comprises information indicative of a process**, the method comprising in response to a submission of an SDU by said RRC layer	Claim 10: A method of operating a user device in a mobile communications network, the device operating using a protocol having a physical layer, and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer, the method comprising in response to a signal from said RLC layer, said signal being indicative of discard of said SDU, causing said RRC layer to resubmit said

to said RLC layer, **starting a timing process in the RRC layer; in response to an indication that the timing process has reached a predetermined timeout, causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times, on each occasion starting said timing process; and in response to N further timeout signals, causing said RRC layer to submit to said RLC layer a failure response message indicative that said process indicated by the information of the SDU has failed.**	SDU to said RLC layer a predetermined number of times N and in response to N further signals indicative of said discard: performing an error recovery procedure; if said error recovery procedure occurs during an ongoing procedure for which special action is specified in the relevant standard specification, executing that action appropriate to said error recovery procedure occurring during that ongoing procedure.
Claim 9: A method according to claim 8, further comprising setting an operating mode wherein an acknowledgement of successful reception of said SDU is awaited.	Claim 12: A method according to claim 10, further comprising setting an operating mode wherein an acknowledgement of successful reception of said SDU is awaited.
Claim 10: A method according to claim 8, wherein N=0.	Claim 13: A method according to claim 10, wherein N=0.
Claim 11: A method according to claim 8, **wherein in response to said RRC layer submitting to said RLC layer a said failure response message, said timer process is started and in response to timeout of said timer process, said method further comprises causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times, on each occasion restarting said timer process; and in response to N further timeout signals, submitting by said RRC layer to said RLC layer of a CELL UPDATE indicative of an unrecoverable error in said RLC layer for emission in response thereto.**	Claim 10: A method of operating a user device in a mobile communications network, the device operating using a protocol having a physical layer, and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer, the method comprising in response to a signal from said RLC layer, said signal being indicative of discard of said SDU, causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number of times N and in response to N further signals indicative of said discard: performing an error recovery procedure; if said error recovery procedure occurs during an ongoing procedure for which special action is specified in the relevant standard specification, executing that action appropriate to said error recovery procedure occurring during that ongoing

	procedure.
	Claim 1: A method of operating a communication device in a mobile communications network, the device operating using a protocol having a physical layer, and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS system, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer, the method comprising in response to a signal from said RLC layer, said signal being indicative of discard of said SDU: causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times; and in response to N further signals indicative of said discard, causing said RRC layer to submit to said RLC layer a CELL UPDATE message indicative of an unrecoverable error in said RLC layer for emission in response thereto.
Claim 12: A method according to claim 8, **wherein if said RLC layer discards said failure response message**, said method further comprises submitting by said RRC layer to said RLC layer of a CELL UPDATE arranged to cause the network control device to emit for said user device a CELL UPDATE CONFIRM message arranged to cause said user device to reconfigure to a determined state.	Claim 4: A method of operating a mobile communications network having at least one cell, said cell having at least one user communication device and at least one network control device for communicating with the or each user communication device, the or each user device operating using a protocol having a physical layer, and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer, the method comprising in response to a signal from said RLC layer, said signal being indicative of discard of said SDU, causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times; and in response to N further signals

	indicative of said discard submitting by said RRC layer to said RLC layer of a CELL UPDATE message arranged to cause the network control device to emit for said user communication device a CELL UPDATE CONFIRM message arranged to cause said user device to reconfigure to a determined state.
Claim 13: A method according to claim 8, **wherein in response to said RRC layer submitting to said RLC layer a said failure response message, said timer process is started and in response to timeout of said timer process, said method further comprises releasing connection between peer layers at the said device and the said network and entering an idle mode.**	Claim 10: A method of operating a user device in a mobile communications network, the device operating using a protocol having a physical layer, and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer, the method comprising in response to a signal from said RLC layer, said signal being indicative of discard of said SDU, causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number of times N and in response to N further signals indicative of said discard: performing an error recovery procedure; if said error recovery procedure occurs during an ongoing procedure for which special action is specified in the relevant standard specification, executing that action appropriate to said error recovery procedure occurring during that ongoing procedure.
Claim 14: A method according to claim 8, **wherein in response to said RRC layer submitting to said RLC layer a said failure response message, said timer process is started and in response to timeout of said timer process, causing said RRC layer to respond as though the failure response message was duly sent.**	Claim 10: A method of operating a user device in a mobile communications network, the device operating using a protocol having a physical layer, and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer, the method comprising in response to a signal from said RLC layer, said signal being indicative of discard of said SDU,

	causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number of times N and in response to N further signals indicative of said discard: performing an error recovery procedure; if said error recovery procedure occurs during an ongoing procedure for which special action is specified in the relevant standard specification, executing that action appropriate to said error recovery procedure occurring during that ongoing procedure.

Regarding Claims 1, 4-6, 8 and 11-12

Application No. 10/774307 discloses the features of the instant application as discussed above. **Application No. 10/774307 does not disclose the following features:**

Regarding claim 1, wherein said SDU comprises information indicative of a process and a failure response message indicative that said process indicated by the information of the SDU has failed.

Regarding claim 4, wherein if said RLC layer discards said failure response message, said method further comprises causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times; and in response to N further signals indicative of said discard, submitting by said RRC layer to said RLC layer of a CELL UPDATE indicative of an unrecoverable error in said RLC layer for emission in response thereto.

Regarding claim 5, wherein if said RLC layer discards said failure response message.

Regarding claim 8, wherein said SDU comprises information indicative of a process and starting a timing process in the RRC layer; in response to an indication that the timing process has reached a predetermined timeout, causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times, on each occasion starting said timing process; and in response to N further timeout signals, causing said RRC layer to submit to said RLC layer a failure response message indicative that said process indicated by the information of the SDU has failed.

Regarding claim 11, wherein in response to said RRC layer submitting to said RLC layer a said failure response message, said timer process is started and in response to timeout of said timer process, said method further comprises causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times, on each occasion restarting said timer process; and in response to N further timeout signals, submitting by said RRC layer to said RLC layer of a CELL UPDATE indicative of an unrecoverable error in said RLC layer for emission in response thereto.

Regarding claim 12, wherein if said RLC layer discards said failure response message.   .

Yi et al (U.S. Patent Application Publication No. US 2003/0007459 A1) discloses a method for controlling retransmission of information using state variables in a radio communication system, comprising the following features:

Regarding claim 1, wherein said SDU comprises information (par. 0005, lines 15-18, multimedia services, such as voice, video, and data) indicative of a process (par. 0005, lines 15-18, multimedia services, such as voice, video, and data), and a failure

response message (par. 0093, line 13, error processing process) indicative that said

process indicated by the information of the SDU has failed (par. 0093, lines 12-14, the

value of VT (MRW) becomes the same as or larger than the critical value).

Regarding claim 4, wherein if said RLC layer discards (par. 0041, lines 6-9,

RESET ACK PDU not received) said failure response message (par. 0041, line 5,

RESET PDU), said method further comprises causing said RRC layer to resubmit (par.

0041, lines 8-9, an identical RESET PDU is retransmitted) said SDU to said RLC layer a

predetermined number N of times (par. 0042, lines 1-2, VT (RST) represents the

number that the RST instruction is sent); and in response to N further signals (par.

0042, lines 1-2, VT (RST) represents the number that the RST instruction is sent)

indicative of said discard (par. 0042, lines 1-3, VT (RST) represents the number that the

RST instruction is sent and the value is increased by one whenever the sender sends

the RESET PDU), submitting (par. 0042, lines 5-6, notifies such condition to the upper

layer) by said RRC layer to said RLC layer of a CELL UPDATE (par. 0042, line 5,

further restoration is impossible) indicative of an unrecoverable error (par. 0042, line 5,

further restoration is impossible) in said RLC layer for emission in response thereto.

Regarding claim 5, wherein if said RLC layer discards (par. 0041, lines 6-9,

RESET ACK PDU not received) said failure response message (par. 0041, line 5,

RESET PDU).

Regarding claim 6, wherein if said RLC layer discards (par. 0041, lines 6-9,

RESET ACK PDU not received) said failure response message (par. 0041, line 5,

RESET PDU).

Regarding claim 8, wherein said SDU comprises information (par. 0005, lines 15-18, multimedia services, such as voice, video, and data) indicative of a process (par. 0005, lines 15-18, multimedia services, such as voice, video, and data) and starting a timing process (par. 0038, lines 3-4, sender drives Timer_MRW) in the RRC layer (par. 0017, lines 3-7, RRC functions); in response (par. 0038, information is re-transmitted) to an indication that the timing process has reached a predetermined timeout (par. 0038, line 7 timer is expired), causing said RRC layer to resubmit (par. 0038, line 8, information is re-transmitted) said SDU to said RLC layer a predetermined number N of times (par. 0039, MaxMRW), on each occasion starting said timing process (fig. 5, process step 54, checking Timer_MRW); and in response to N further timeout signals (par. 0039, MaxMRW), causing said RRC layer to submit to said RLC layer a failure response message (par. 0041, line 2, RESET PDU) indicative that said process indicated by the information of the SDU has failed (par. 0039, MRW instruction can no longer be performed and resets the operation of the RLC layer).

Regarding claim 11, wherein in response (par. 0041, line 1, reset instruction is performed) to said RRC layer submitting to said RLC layer a said failure response message, said timer process is started (fig. 6, process step 64, Timer_RST) and in response to timeout of said timer process (fig. 6, process step 64, checking Timer_RST), said method further comprises causing said RRC layer to resubmit (fig. 6, process step 62, transmitting RESET PDU) said SDU to said RLC layer a predetermined number N of times (fig. 6, process step 63, MaxRST), on each occasion restarting said timer process (fig. 6, loop comprising process steps 61-65); and in

response to N further timeout signals (par. 0042, MaxRST), submitting by said RRC layer to said RLC layer of a CELL UPDATE (par. 0042, line 5, further restoration is impossible) indicative of an unrecoverable error (par. 0042, line 5, further restoration is impossible) in said RLC layer for emission in response thereto.

Regarding claim 12, wherein if said RLC layer discards (par. 0041, lines 6-9, RESET ACK PDU not received) said failure response message (par. 0041, line 5, RESET PDU).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Application No. 10/774307 by using the features, as taught by Yi et al, in order to prevent wasting radio resources (Yi et al, abstract, line 10).

Regarding Claim 13

Application No. 10/774307 discloses the features of the instant application as discussed above. **Application No. 10/774307 does not disclose the following features:**

Regarding claim 13, wherein in response to said RRC layer submitting to said RLC layer a said failure response message, said timer process is started and in response to timeout of said timer process, said method further comprises releasing connection between peer layers at the said device and the said network and entering an idle mode.

Yi et al further discloses the following features:

Regarding claim 13, wherein in response to said RRC layer submitting to said

RLC layer a said failure response message (par. 0041, line 2, RESET PDU), said timer

process is started (fig. 6, process step 64, Timer_RST).

Yi et al does not disclose the following features:

Regarding claim 13, said method further comprises releasing connection

between peer layers at the said device and the said network and entering an idle mode.

Brame et al discloses a message bus slot update/idle control in RF

trunking multisite switch, comprising the following features:

Regarding claim 13, and in response to timeout (fig. 6, process step 63,

MaxRST) of said timer process said method further comprises releasing connection

(col. 5, line 8, connections are terminated) between peer layers (fig. 4, call to console)

at the said device and the said network and entering an idle mode (col. 5, line 7, slot

idle messages).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify the system of Application No. 10/774307 by using the features, as

taught by Yi et al and Brame et al, in order to prevent wasting radio resources (Yi et al,

abstract, line 10) and to allow a caller in one site area to communicate with a callee in

another area (Brame et al, col. 2, lines 16-19).

Regarding Claims 7 and 14

Application No. 10/774307 discloses the features of the instant application as discussed above. **Application No. 10/774307 does not disclose the following features:**

Regarding claim 7, wherein if said RLC layer discards said failure response message, causing said RRC layer to respond as though the failure response message was duly sent.

Regarding claim 14, wherein in response to said RRC layer submitting to said RLC layer a said failure response message, said timer process is started and in response to timeout of said timer process, causing said RRC layer to respond as though the failure response message was duly sent.

Yi et al further discloses the following features:

Regarding claim 7, wherein if said RLC layer discards (par. 0041, lines 6-9, RESET ACK PDU not received) said failure response message (par. 0041, line 5, RESET PDU).

Regarding claim 14, wherein in response to said RRC layer submitting to said RLC layer a said failure response message (par. 0041, line 2, RESET PDU), said timer process is started (fig. 6, process step 64, Timer_RST).

Yi et al does not disclose the following features:

Regarding claim 7, causing said RRC layer to respond as though the failure response message was duly sent.

Regarding claim 14, causing said RRC layer to respond as though the failure response message was duly sent.

Odenwalder et al discloses rescheduling scheduled transmissions, comprising the following features:

Regarding claim 7, causing said RRC layer to respond as though the failure response message was duly sent (par. 0058, lines 14-16, the base station ignores the ACK signal and continues with the scheduled retransmissions).

Regarding claim 14, causing said RRC layer to respond as though the failure response message was duly sent (par. 0058, lines 14-16, the base station ignores the ACK signal and continues with the scheduled retransmissions).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Application No. 10/774307 by using the features, as taught by Yi et al and Odenwalder et al, in order to prevent wasting radio resources (Yi et al, abstract, line 10) and provide enhancement of a transmission schedule (Odenwalder et al, par. 0009, lines 1-2).

8.   Claims 2-3, 5 and 9-12 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-5 of copending Application No. 10/774059. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed limitations are equivalent.

This is a <u>provisional</u> obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

9.   Claims 1, 4 and 8 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 4 and 5 of copending Application No. 10/774059 in view of Yi et al. See explanation and table below.

This is a <u>provisional</u> obviousness-type double patenting rejection.

10.   Claims 6 and 13 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 7 of copending Application No. 10/774059 in view of Yi et al and Brame et al. See explanation and table below.

This is a <u>provisional</u> obviousness-type double patenting rejection.

11.   Claims 7 and 14 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/774059 in view of Yi et al and Odenwalder et al. See explanation and table below.

This is a <u>provisional</u> obviousness-type double patenting rejection.

Below is a comparison of the respective claims. **Bold** sections of claims from the instant application indicate non-identical features found in claims from the copending application, also marked in **bold,** or by one or more secondary references, shown below.

Instant Application 10/774306	Copending Application 10/774059
Claim 1: A method of operating a device in a mobile communications network, the device operating using a protocol having a physical layer, a user layer and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS system, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer, **wherein said SDU comprises information indicative of a process, the method comprising in response to a signal from said RLC layer, said signal being indicative of discard of said SDU, causing said RRC layer to resubmit said SDU to said lower layer a predetermined number N of times; and in response to N further signals indicative of said discard, causing said RRC layer to submit to said RLC layer a failure response message indicative that said process indicated by the information of the SDU has failed.**	Claim 1: A method of operating a communication device in a mobile communications network, the device operating using a protocol having a physical layer, a user layer and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS system, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer and thereupon to start a timer process in the RRC layer, the method comprising in response/to said timer process reaching a predetermined timeout value: causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times, each time starting said timer process; and in response to N further instances of said timer process reaching its timeout value, causing said RRC layer to submit to said RLC layer an error message indicative of an unrecoverable error in said RLC layer for emission in response thereto.
Claim 2: A method according to claim 1, further comprising setting an operating mode wherein an acknowledgement of successful reception of said SDU is awaited.	Claim 2: A method according to claim 1, further comprising setting an operating mode wherein an acknowledgement of successful reception of said SDU is awaited.
Claim 3: A method according to claim 1, wherein N=0.	Claim 3: A method according to claim 1, wherein N=0.
Claim 4: A method according to claim 1, **wherein if said RLC layer discards said failure response message**, said method further comprises causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times; **and in response to N further signals indicative of said discard,** submitting by said RRC layer to said RLC layer of a CELL UPDATE indicative of an unrecoverable error in said RLC layer for emission in response thereto.	Claim 4: A method of operating a mobile communications network having at least one cell, said cell having at least one user communication device and at least one network control device for communicating with the or each user communication device, the or each user device operating using a protocol having a physical layer, a user layer and at least a RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS system, wherein the RRC layer is arranged to

	submit an SDU to the RLC layer for communication using the physical layer and thereupon to start a timer process, the method comprising in response to said timer process reaching a predetermined timeout value: causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times, each time starting said timer process; and in response to N further instances of said timer process reaching its timeout value, causing said RRC layer to submit to said RLC layer a first message arranged to cause the network control device to emit for said user communication device a second message arranged to cause said user device to reconfigure to a determined state. Claim 5: A method according to claim 4, wherein said first message is a CELL UPDATE message and the second message is a CELL UPDATE CONFIRM message.
Claim 5: A method according to claim 1, wherein if said RLC layer discards said failure response message, said method further comprises submitting by said RRC layer to said RLC layer of a CELL UPDATE message arranged to cause the network control device to emit for said user device a CELL UPDATE CONFIRM message arranged to cause said user device to reconfigure to a determined state.	Claim 4: A method of operating a mobile communications network having at least one cell, said cell having at least one user communication device and at least one network control device for communicating with the or each user communication device, the or each user device operating using a protocol having a physical layer, a user layer and at least a RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS system, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer and thereupon to start a timer process, the method comprising in response to said timer process reaching a predetermined timeout value: causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times, each

	time starting said timer process; and in response to N further instances of said timer process reaching its timeout value, causing said RRC layer to submit to said RLC layer a first message arranged to cause the network control device to emit for said user communication device a second message arranged to cause said user device to reconfigure to a determined state. Claim 5: A method according to claim 4, wherein said first message is a CELL UPDATE message and the second message is a CELL UPDATE CONFIRM message.
Claim 6: A method according to claim 1, **wherein if said RLC layer discards said failure response message**, said method further comprises releasing connection between peer layers at the said device and the said network and **entering an idle mode.**	Claim 7: A method of operating a communication device in a mobile communications network, the device operating using a protocol having a physical layer, a user layer and at least an RRC (radio resource control) layer and RLC (radio link control) layer of a UMTS system, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer and thereupon to start a timer process, the method comprising: in response to said timer process reaching a predetermined timeout value: causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times; and in response to N further timeout signals, releasing connection between peer layers at the said device and the said network.
Claim 7: A method according to claim 1, **wherein if said RLC layer discards said failure response message, causing said RRC layer to respond as though the failure response message was duly sent.**	Claim 1: A method of operating a communication device in a mobile communications network, the device operating using a protocol having a physical layer, a user layer and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS system, wherein the RRC layer is arranged to submit an SDU to the RLC

	layer for communication using the physical layer and thereupon to start a timer process in the RRC layer, the method comprising in response/to said timer process reaching a predetermined timeout value: causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times, each time starting said timer process; and in response to N further instances of said timer process reaching its timeout value, causing said RRC layer to submit to said RLC layer an error message indicative of an unrecoverable error in said RLC layer for emission in response thereto.
Claim 8: A method of operating a device in a mobile communications network, the device operating using a protocol having a physical layer, a user layer and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS system, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer, **wherein said SDU comprises information indicative of a process**, the method comprising in response to a submission of an SDU by said RRC layer to said RLC layer, starting a timing process in the RRC layer; in response to an indication that the timing process has reached a predetermined timeout, causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times, on each occasion starting said timing process; and in response to N further timeout signals, causing said RRC layer to submit to said RLC layer a failure response message indicative that said process indicated by the information of the SDU has failed.	Claim 1: A method of operating a communication device in a mobile communications network, the device operating using a protocol having a physical layer, a user layer and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS system, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer and thereupon to start a timer process in the RRC layer, the method comprising in response to said timer process reaching a predetermined timeout value: causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times, each time starting said timer process; and in response to N further instances of said timer process reaching its timeout value, causing said RRC layer to submit to said RLC layer an error message indicative of an unrecoverable error in said RLC layer for emission in response thereto.
Claim 9: A method according to claim 8, further comprising setting an operating mode wherein an acknowledgement of	Claim 2: A method according to claim 1, further comprising setting an operating mode wherein an acknowledgement of

successful reception of said SDU is awaited.	successful reception of said SDU is awaited.
Claim 10: A method according to claim 8, wherein N=0.	Claim 3: A method according to claim 1, wherein N=0.
Claim 11: A method according to claim 8, wherein in response to said RRC layer submitting to said RLC layer a said failure response message, said timer process is started and in response to timeout of said timer process, said method further comprises causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times, on each occasion restarting said timer process; and in response to N further timeout signals, submitting by said RRC layer to said RLC layer of a CELL UPDATE indicative of an unrecoverable error in said RLC layer for emission in response thereto.	Claim 1: A method of operating a communication device in a mobile communications network, the device operating using a protocol having a physical layer, a user layer and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS system, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer and thereupon to start a timer process in the RRC layer, the method comprising in response to said timer process reaching a predetermined timeout value: causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times, each time starting said timer process; and in response to N further instances of said timer process reaching its timeout value, causing said RRC layer to submit to said RLC layer an error message indicative of an unrecoverable error in said RLC layer for emission in response thereto. Claim 4: A method of operating a mobile communications network having at least one cell, said cell having at least one user communication device and at least one network control device for communicating with the or each user communication device, the or each user device operating using a protocol having a physical layer, a user layer and at least a RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS system, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer and thereupon to start a timer process, the

	method comprising in response to said timer process reaching a predetermined timeout value: causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times, each time starting said timer process; and in response to N further instances of said timer process reaching its timeout value, causing said RRC layer to submit to said RLC layer a first message arranged to cause the network control device to emit for said user communication device a second message arranged to cause said user device to reconfigure to a determined state. Claim 5: A method according to claim 4, wherein said first message is a CELL UPDATE message and the second message is a CELL UPDATE CONFIRM message.
Claim 12: A method according to claim 8, wherein if said RLC layer discards said failure response message, said method further comprises submitting by said RRC layer to said RLC layer of a CELL UPDATE arranged to cause the network control device to emit for said user device a CELL UPDATE CONFIRM message arranged to cause said user device to reconfigure to a determined state.	Claim 1: A method of operating a communication device in a mobile communications network, the device operating using a protocol having a physical layer, a user layer and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS system, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer and thereupon to start a timer process in the RRC layer, the method comprising in response to said timer process reaching a predetermined timeout value: causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times, each time starting said timer process; and in response to N further instances of said timer process reaching its timeout value, causing said RRC layer to submit to said RLC layer an error message indicative of an unrecoverable error in said RLC layer

	for emission in response thereto.
	Claim 4: A method of operating a mobile communications network having at least one cell, said cell having at least one user communication device and at least one network control device for communicating with the or each user communication device, the or each user device operating using a protocol having a physical layer, a user layer and at least a RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS system, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer and thereupon to start a timer process, the method comprising in response to said timer process reaching a predetermined timeout value: causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times, each time starting said timer process; and in response to N further instances of said timer process reaching its timeout value, causing said RRC layer to submit to said RLC layer a first message arranged to cause the network control device to emit for said user communication device a second message arranged to cause said user device to reconfigure to a determined state.

Claim 5: A method according to claim 4, wherein said first message is a CELL UPDATE message and the second message is a CELL UPDATE CONFIRM message. |
| Claim 13: A method according to claim 8, wherein in response to said RRC layer submitting to said RLC layer a said failure response message, said timer process is started and in response to timeout of said timer process, said method further | Claim 7: A method of operating a communication device in a mobile communications network, the device operating using a protocol having a physical layer, a user layer and at least an RRC (radio resource control) layer and |

comprises releasing connection between peer layers at the said device and the said network and **entering an idle mode.**	RLC (radio link control) layer of a UMTS system, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer and thereupon to start a timer process, the method comprising: in response to said timer process reaching a predetermined timeout value: causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times; and in response to N further timeout signals, releasing connection between peer layers at the said device and the said network.
Claim 14: A method according to claim 8, **wherein in response to said RRC layer submitting to said RLC layer a said failure response message, said timer process is started and in response to timeout of said timer process, causing said RRC layer to respond as though the failure response message was duly sent.**	Claim 1: A method of operating a communication device in a mobile communications network, the device operating using a protocol having a physical layer, a user layer and at least an RRC (radio resource control) layer and an RLC (radio link control) layer of a UMTS system, wherein the RRC layer is arranged to submit an SDU to the RLC layer for communication using the physical layer and thereupon to start a timer process in the RRC layer, the method comprising in response to said timer process reaching a predetermined timeout value: causing said RRC layer to resubmit said SDU to said RLC layer a predetermined number N of times, each time starting said timer process; and in response to N further instances of said timer process reaching its timeout value, causing said RRC layer to submit to said RLC layer an error message indicative of an unrecoverable error in said RLC layer for emission in response thereto.

Regarding Claims 1, 4 and 8

Application No. 10/774059 discloses the features of the instant application as discussed above. **Application No. 10/774307 does not disclose the following features:**

Regarding claim 1, wherein said SDU comprises information indicative of a process, the method comprising in response to a signal from said RLC layer, said signal being indicative of discard of said SDU, causing said RRC layer to resubmit said SDU to said lower layer a predetermined number N of times; and in response to N further signals indicative of said discard, causing said RRC layer to submit to said RLC layer a failure response message indicative that said process indicated by the information of the SDU has failed.

Yi et al (U.S. Patent Application Publication No. US 2003/0007459 A1) discloses a method for controlling retransmission of information using state variables in a radio communication system, comprising the following features:

Regarding claim 1, wherein said SDU comprises information (par. 0005, lines 15-18, multimedia services, such as voice, video, and data) indicative of a process (par. 0005, lines 15-18, multimedia services, such as voice, video, and data), the method comprising in response to a signal (par. 0024, RLC layer receives the state information with which success of transmission can be judged; par. 0058, line 4, sender reports the status) from said RLC layer (par. 0024, RLC layer receives the state information with which success of transmission can be judged), said signal being indicative of discard (par. 0024, RLC layer receives the state information with which success of transmission

can be judged) of said SDU, causing said RRC layer to resubmit (par. 0085, lines 10-

11, the information is re-transmitted) said SDU to said lower layer a predetermined

number N (par. 0085, lines 12-15, when the state variable becomes same as or larger

than the critical value, the retransmission process is terminated; fig. 7, process steps

71, 72, 73, 74, 75) of times; and in response to N further signals (fig. 7, process steps

71, 72, 73, 74, 75) indicative (fig. 7, transmission success question step 73) of said

discard, causing said RRC layer to submit (par. 0082, lines 11-13, the sender sends a

reset instruction for instructing reset of the radio link control layer to the receiver) to said

RLC layer (par. 0093, lines 13-14, error processing process, such as reset of the RLC

layer) a failure response message (par. 0093, line 13, error processing process)

indicative that said process indicated by the information of the SDU has failed (par.

0093, lines 12-14, the value of VT (MRW) becomes the same as or larger than the

critical value).

Regarding claim 4, wherein if said RLC layer discards (par. 0041, lines 6-9,

RESET ACK PDU not received) said failure response message (par. 0041, line 5,

RESET PDU), and in response to N further (par. 0042, lines 1-2, VT (RST) represents

the number that the RST instruction is sent) indicative of said discard (par. 0042, lines

1-3, VT (RST).

Regarding claim 8, wherein said SDU comprises information indicative of a

process (par. 0005, lines 15-18, multimedia services, such as voice, video, and data).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify the system of Application No. 10/774307 by using the features, as

taught by Yi et al, in order to prevent wasting radio resources (Yi et al, abstract, line 10).

Regarding Claims 6 and 13

Application No. 10/774059 discloses the features of the instant application as

discussed above. **Application No. 10/774307 does not disclose the following**

features:

Regarding claim 6, wherein if said RLC layer discards said failure response

message and entering an idle mode.

Regarding claim 13, entering an idle mode.

Yi et al further discloses the following features:

Regarding claim 6, wherein if said RLC layer discards (par. 0041, lines 6-9,

RESET ACK PDU not received) said failure response message (par. 0041, line 5,

RESET PDU).

Yi et al does not disclose the following features:

Regarding claim 6, entering an idle mode.

Regarding claim 13, entering an idle mode.

Brame et al discloses a message bus slot update/idle control in RF

trunking multisite switch, comprising the following features:

Regarding claim 6, entering an idle mode (col. 5, line 7, slot idle messages).

Regarding claim 13, entering an idle mode (col. 5, line 7, slot idle messages).

It would have been obvious to one of ordinary skill in the art at the time of the invention

to modify the system of Application No. 10/774307 by using the features, as taught by

Yi et al and Brame et al, in order to prevent wasting radio resources (Yi et al, abstract,

line 10) and to allow a caller in one site area to communicate with a callee in another

area (Brame et al, col. 2, lines 16-19).

Regarding Claims 7 and 14

Application No. 10/774059 discloses the features of the instant application as

discussed above. **Application No. 10/774307 does not disclose the following**

features:

Regarding claim 7, wherein if said RLC layer discards said failure response

message, causing said RRC layer to respond as though the failure response message

was duly sent.

Regarding claim 14, wherein in response to said RRC layer submitting to said

RLC layer a said failure response message, said timer process is started and in

response to timeout of said timer process, causing said RRC layer to respond as though

the failure response message was duly sent.

Yi et al further discloses the following features:

Regarding claim 7, wherein if said RLC layer discards (par. 0041, lines 6-9,

RESET ACK PDU not received) said failure response message (par. 0041, line 5,

RESET PDU).

Regarding claim 14, wherein in response to said RRC layer submitting to said RLC layer a said failure response message (par. 0041, line 2, RESET PDU), said timer process is started (fig. 6, process step 64, Timer_RST).

Yi et al does not disclose the following features:

Regarding claim 7, causing said RRC layer to respond as though the failure response message was duly sent.

Regarding claim 14, causing said RRC layer to respond as though the failure response message was duly sent.

Odenwalder et al discloses rescheduling scheduled transmissions, comprising the following features:

Regarding claim 7, causing said RRC layer to respond as though the failure response message was duly sent (par. 0058, lines 14-16, the base station ignores the ACK signal and continues with the scheduled retransmissions).

Regarding claim 14, causing said RRC layer to respond as though the failure. response message was duly sent (par. 0058, lines 14-16, the base station ignores the ACK signal and continues with the scheduled retransmissions).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Application No. 10/774307 by using the features, as taught by Yi et al and Odenwalder et al, in order to prevent wasting radio resources (Yi et al, abstract, line 10) and provide enhancement of a transmission schedule (Odenwalder et al, par. 0009, lines 1-2).

Claim Rejections - 35 USC § 102

12.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13.   Claims 1-5 and 8-12 are rejected under 35 U.S.C. 102(b) as being

anticipated by Yi et al (U.S. Patent Application Publication No. US 2003/0007459

A1).

Yi et al discloses a method for controlling retransmission of information

using state variables in a radio communication system, comprising the following

features:

Regarding claim 1, a method of operating a device in a mobile communications

network (par. 0003, lines 1-3, method for re-transmitting data or control information in

the radio link control layer of an IMT-2000 radio communication system), the device

operating using a protocol (par. 0015 protocol data unit) having a physical layer (fig. 1,

Transport Channel PHY; par. 0011, line 5, Physical Layer), a user layer (par. 0011, line

5, user plane) and at least an RRC (radio resource control) layer (fig. 1, RRC (third

layer)) and an RLC (radio link control) layer (fig. 1, RLC (second layer)) of a UMTS

system (par. 0006, lines 7-10, UMTS), wherein the RRC layer is arranged to submit (fig.

1, connection between RRC and RLC) an SDU (fig. 2, RLC SDU; par. 0019, lines 1-4,

RLC SDU comes from the upper layer) to the RLC layer (par. 0019, lines 1-5, RLC layer

performs segmentation and concatenation of the RLC SDU) for communication (par.

0015, transmitted to the MAC layer) using the physical layer (fig. 1, connections among

RRC layer, RLC layer and Transport Channel PHY), wherein said SDU comprises

information (par. 0005, lines 15-18, multimedia services, such as voice, video, and data)

indicative of a process (par. 0005, lines 15-18, multimedia services, such as voice,

video, and data), the method comprising in response to a signal (par. 0024, RLC layer

receives the state information with which success of transmission can be judged; par.

0058, line 4, sender reports the status) from said RLC layer (par. 0024, RLC layer

receives the state information with which success of transmission can be judged), said

signal being indicative of discard (par. 0024, RLC layer receives the state information

with which success of transmission can be judged) of said SDU, causing said RRC

layer to resubmit (par. 0085, lines 10-11, the information is re-transmitted) said SDU to

said lower layer a predetermined number N (par. 0085, lines 12-15, when the state

variable becomes same as or larger than the critical value, the retransmission process

is terminated; fig. 7, process steps 71, 72, 73, 74, 75) of times; and in response to N

further signals (fig. 7, process steps 71, 72, 73, 74, 75) indicative (fig. 7, transmission

success question step 73) of said discard, causing said RRC layer to submit (par. 0082,

lines 11-13, the sender sends a reset instruction for instructing reset of the radio link

control layer to the receiver) to said RLC layer (par. 0093, lines 13-14, error processing

process, such as reset of the RLC layer) a failure response message (par. 0093, line

13, error processing process) indicative that said process indicated by the information of

the SDU has failed (par. 0093, lines 12-14, the value of VT (MRW) becomes the same as or larger than the critical value).

Regarding claim 2, further comprising setting an operating mode (par. 0024, lines 1-2, acknowledged mode) wherein an acknowledgement (par. 0027, line 6, positive acknowledgement) of successful reception (par. 0027, line 5, received RLC PDU) of said SDU is awaited (par. 0024, lines 1-2, acknowledged mode).

Regarding claim 3, wherein N=0 (par. 0023, lines 1-3, unacknowledged mode, wherein re-transmission is not supported). The examiner notes that having no re-transmission is equivalent to re-transmitting zero times.

Regarding claim 4, wherein if said RLC layer discards (par. 0041, lines 6-9, RESET ACK PDU not received) said failure response message (par. 0041, line 5, RESET PDU), said method further comprises causing said RRC layer to resubmit (par. 0041, lines 8-9, an identical RESET PDU is retransmitted) said SDU to said RLC layer a predetermined number of times (par. 0042, lines 1-2, VT (RST) represents the number that the RST instruction is sent); and in response to N further signals (par. 0042, lines 1-2, VT (RST) represents the number that the RST instruction is sent) indicative of said discard (par. 0042, lines 1-3, VT (RST) represents the number that the RST instruction is sent and the value is increased by one whenever the sender sends the RESET PDU), submitting (par. 0042, lines 5-6, notifies such condition to the upper layer) by said RRC layer to said RLC layer of a CELL UPDATE (par. 0042, line 5, further restoration is impossible) indicative of an unrecoverable error (par. 0042, line 5, further restoration is impossible) in said RLC layer for emission in response thereto.

Regarding claim 5, wherein if said RLC layer discards (par. 0041, lines 6-9,

RESET ACK PDU not received) said failure response message (par. 0041, line 5,

RESET PDU), said method further comprises submitting (par. 0041, lines 1-4, reset

instruction is performed by sending the RESET PDU to the receiver) by said RRC layer

to said RLC layer of a CELL UPDATE message (par. 0041, line 2, RESET PDU)

arranged to cause the network control device to emit for said user device a CELL

UPDATE CONFIRM message (par. 0041, line 2, RESET PDU) arranged to cause said

user device to reconfigure to a determined state (par. 0039, lines 4-5, resets the

operation of the RLC layer; fig. 5, process steps 51-55).

Regarding claim 8, a method of operating a device in a mobile communications

network (par. 0003, lines 1-3, method for re-transmitting data or control information in

the radio link control layer of an IMT-2000 radio communication system), the device

operating using a protocol (par. 0015 protocol data unit) having a physical layer (fig. 1,

Transport Channel PHY; par. 0011, line 5, Physical Layer), a user layer (par. 0011, line

5, user plane) and at least an RRC (radio resource control) layer (fig. 1, RRC (third

layer)) and an RLC (radio link control) layer (fig. 1, RLC (second layer)) of a UMTS

system (par. 0006, lines 7-10, UMTS), wherein the RRC layer is arranged to submit (fig.

1, connection between RRC and RLC) an SDU (fig. 2, RLC SDU; par. 0019, lines 1-4,

RLC SDU comes from the upper layer) to the RLC layer (par. 0019, lines 1-5, RLC layer

performs segmentation and concatenation of the RLC SDU) for communication (par.

0015, transmitted to the MAC layer) using the physical layer (fig. 1, connections among

RRC layer, RLC layer and Transport Channel PHY), wherein said SDU comprises

information (par. 0005, lines 15-18, multimedia services, such as voice, video, and data) indicative of a process (par. 0005, lines 15-18, multimedia services, such as voice, video, and data), the method comprising in response to a submission of an SDU (par. 0019, lines 1-2, RLC SDU which comes from the upper layer; fig. 1, RRC is upper layer) by said RRC layer to said RLC layer (fig. 1, lines connecting RRC and RLC), starting a timing process (par. 0038, lines 3-4, sender drives Timer_MRW) in the RRC layer (par. 0017, lines 3-7, RRC functions); in response (par. 0038, information is re-transmitted) to an indication that the timing process has reached a predetermined timeout (par. 0038, line 7 timer is expired), causing said RRC layer to resubmit (par. 0038, line 8, information is re-transmitted) said SDU to said RLC layer a predetermined number N of times (par. 0039, MaxMRW), on each occasion starting said timing process (fig. 5, process step 54, checking Timer_MRW); and in response to N further timeout signals (par. 0039, MaxMRW), causing said RRC layer to submit to said RLC layer a failure response message (par. 0041, line 2, RESET PDU) indicative that said process indicated by the information of the SDU has failed (par. 0039, MRW instruction can no longer be performed and resets the operation of the RLC layer).

Regarding claim 9, further comprising setting an operating mode (par. 0024, lines 1-2, acknowledged mode) wherein an acknowledgement (par. 0027, line 6, positive acknowledgement) of successful reception (par. 0027, line 5, received RLC PDU) of said SDU is awaited (par. 0024, lines 1-2, acknowledged mode).

Regarding claim 10, wherein N=0 (par. 0023, lines 1-3, unacknowledged mode, wherein re-transmission is not supported). The examiner notes that having no re-transmission is equivalent to re-transmitting zero times.

Regarding claim 11, wherein in response (par. 0041, line 1, reset instruction is performed) to said RRC layer submitting to said RLC layer a said failure response message, said timer process is started (fig. 6, process step 64, Timer_RST) and in response to timeout of said timer process (fig. 6, process step 64, checking Timer_RST), said method further comprises causing said RRC layer to resubmit (fig. 6, process step 62, transmitting RESET PDU) said SDU to said RLC layer a predetermined number N of times (fig. 6, process step 63, MaxRST), on each occasion restarting said timer process (fig. 6, loop comprising process steps 61-65); and in response to N further timeout signals (par. 0042, MaxRST), submitting by said RRC layer to said RLC layer of a CELL UPDATE (par. 0042, line 5, further restoration is impossible) indicative of an unrecoverable error (par. 0042, line 5, further restoration is impossible) in said RLC layer for emission in response thereto.

Regarding claim 12, wherein if said RLC layer discards (par. 0041, lines 6-9, RESET ACK PDU not received) said failure response message (par. 0041, line 5, RESET PDU), said method further comprises submitting (par. 0041, lines 1-4, reset instruction is performed by sending the RESET PDU to the receiver) by said RRC layer to said RLC layer of a CELL UPDATE (par. 0041, line 2, RESET PDU) arranged to cause the network control device to emit for said user device a CELL UPDATE CONFIRM (par. 0041, line 2, RESET PDU) message arranged to cause said user

device to reconfigure to a determined state (par. 0039, lines 4-5, resets the operation of

the RLC layer; fig. 5, process steps 51-55).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15.   Claims 6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Yi et al in view of Brame et al (U.S. Patent No. 5,253,253).

Yi et al discloses the claimed limitations in paragraph 13 above.

Yi et al further discloses the following features:

Regarding claim 6, wherein if said RLC layer discards (par. 0041, lines 6-9,

RESET ACK PDU not received) said failure response message (par. 0041, line 5,

RESET PDU).

Regarding claim 13, wherein in response to said RRC layer submitting to said

RLC layer a said failure response message (par. 0041, line 2, RESET PDU), said timer

process is started (fig. 6, process step 64, Timer_RST).

Yi et al does not disclose the following features:

Regarding claim 6, said method further comprises releasing connection between

peer layers at the said device and the said network and entering an idle mode.

Regarding claim 13, said method further comprises releasing connection between peer layers at the said device and the said network and entering an idle mode.

Brame et al discloses a message bus slot update/idle control in RF trunking multisite switch, comprising the following features:

Regarding claim 6, said method further comprises releasing connection (col. 5, line 8, connections are terminated) between peer layers (fig. 4, call to console) at the said device and the said network and entering an idle mode (col. 5, line 7, slot idle messages).

Regarding claim 13, and in response to timeout (fig. 6, process step 63, MaxRST) of said timer process said method further comprises releasing connection (col. 5, line 8, connections are terminated) between peer layers (fig. 4, call to console) at the said device and the said network and entering an idle mode (col. 5, line 7, slot idle messages).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Yi et al by using the features, as taught by Brame et al, in order to allow a caller in one site area to communicate with a callee in another area (Brame et al, col. 2, lines 16-19).

16.   **Claims 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yi et al in view of Odenwalder et al (U.S. Patent Application Publication No. US 2002/0159410 A1).**

Yi et al discloses the claimed limitations in paragraph 13 above.

Yi et al further discloses the following features:

Regarding claim 7, wherein if said RLC layer discards (par. 0041, lines 6-9,

RESET ACK PDU not received) said failure response message (par. 0041, line 5,

RESET PDU).

Regarding claim 14, wherein in response to said RRC layer submitting to said

RLC layer a said failure response message (par. 0041, line 2, RESET PDU), said timer

process is started (fig. 6, process step 64, Timer_RST).

Yi et al does not disclose the following features:

Regarding claim 7, causing said RRC layer to respond as though the failure

response message was duly sent.

Regarding claim 14, causing said RRC layer to respond as though the failure

response message was duly sent.

Odenwalder et al discloses rescheduling scheduled transmissions,

comprising the following features:

Regarding claim 7, causing said RRC layer to respond as though the failure

response message was duly sent (par. 0058, lines 14-16, the base station ignores the

ACK signal and continues with the scheduled retransmissions).

Regarding claim 14, causing said RRC layer to respond as though the failure

response message was duly sent (par. 0058, lines 14-16, the base station ignores the

ACK signal and continues with the scheduled retransmissions).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify the system of Yi et al by using the features, as taught by

Odenwalder et al, in order to provide enhancement of a transmission schedule

(Odenwalder et al, par. 0009, lines 1-2).

Conclusion

17.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. Cheng et al (U.S. Patent Application Publication No.

2002/0191544 A1) discloses a method and system for interlayer control between re-

sequencing and retransmission entities Drottar et al (U.S. Patent No. 6,181,704 B1)

discloses a method and apparatus for input/output link retry, failure and recovery in a

computer network. Laroia et al (U.S. Patent No. 6,816,478 B1) discloses an apparatus

and method for use in effecting automatic repeat requests in wireless multiple access

communication systems. Ostman (U.S. Patent No. 6,738,370 B2) discloses a method

and apparatus implementing retransmission in a communication system providing H-

ARQ. Panjak (U.S. Patent No. 6,807,426 B2) discloses a method and apparatus for

scheduling transmissions in a communication system. Chuah et al (U.S. Patent No.

6,400,695 B1) discloses methods and apparatus for retransmission based access

priority in a communications system. Moulsley (U.S. Patent No. 6,804,206 B1)

discloses a radio communication system. Hunt (U.S. Patent No. 6,868,079 B1)

discloses a radio communication system with request re-transmission until

acknowledged. Kuo et al (U.S. Patent No. 6,961,570 B2) discloses handling of a

wireless device re-entering a service area. De Jong et al (U.S. Patent Application

Publication No. 2005/0175034) discloses an apparatus and method for operating a

communications device in a mobile communications network. Funnell et al (U.S. Patent Application Publication No. 2005/0175033) discloses an apparatus and method for operating a communications device in a mobile communications network. Chen (U.S. Patent Application Publication No. 2003/0207702) discloses enhancement to the recovery mechanism for cell update procedure in cell_dch state. Chen (U.S. Patent Application Publication No. 2005/0054298) discloses handling of an unrecoverable error on a dedicated channel. Wu (U.S. Patent Application Publication No. 2004/0203623) discloses a scheme to retransmit radio resource control messages during a radio link control reset in a wireless communication system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nick Deichmeister whose telephone number is (571) 272-9746. The examiner can normally be reached on Monday through Friday (off alternate Fridays).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Yao can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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NFD

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